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ABSTRACT

A study sought to determine if deterrents to the introduction of certain kinds of educational technology were statutory in nature. The thesis was advanced that educational technology is a threat to the power base of education and the more comprehensive the technology, the greater the threat; therefore the laws and policies setting forth the governance of education would act to inhibit and/or prohibit applications of educational technology that are alternatives, rather than supplements, to classroom teachers. Four key areas of educational governance were studied: (1) certification; (2) accreditation; (3) state financial aid; and (4) professional negotiations. While the hypothesis was confirmed, the situation was found to be in a state of flux, with some traditional means of enforcing certain barriers easing, or disappearing, and other means of enforcing those barriers taking over. Thus state financial aid is moving away from instructional units, toward "equal yield" formulas based soley on equal support of students. However, teacher associations are moving in to ensure continuance of what they regard as favorable pupil/teacher ratios. Another finding was the unsettled question of the extent to which school districts can contract away their responsibilities and authority. It was concluded that education is no longer a self-governing community, and now the courts have become key agents of change in education. (HAB)

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FINAL REPORT

Project No. 4-0781
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Legal Barriers to Educational Technology and Instructional Productivity

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Abstract

Legal Barriers to Educational Technology and Instructional Productivity

The purpose of this study was to determine if deterrents to the introduction of certain kinds of educational technology were statutory in nature. The thesis was advanced that educational technology is a threat to the power base of education and the more comprehensive the technology, the greater the threat. On this basis, the hypothesis was advanced that the laws and policies setting forth the governance of education would act to inhibit and/or prohibit applications of educational technology that are alternates, rather than supplements, to classroom teachers.

Four key areas of educational governance were chosen for investigation: certification, accreditation, state financial aid, and professional negotiations. By contract, the research was limited to a search of the legal case literature, commentaries on same, and official publications of concerned agencies. Instructional productivity was assumed to mean achieving at least the same output with use of more cost-effective inputs.

While the hypothesis was confirmed, the situation was found to be in a state of flux, with some traditional means of enforcing certain barriers easing, or disappearing, and other means of enforcing those barriers taking over. Thus state financial aid is moving away from instructional units, a traditional means of enforcing pupil/teacher ratios, toward "equal yield" formulas based solely on equal support of students. However, teacher associations are moving in to ensure continuance of what they regard as favorable pupil/teacher ratios.

The accrediting associations were found to tend to restrain certain applications of technology but their voluntary, quasi-legal status makes legal challenges difficult.

Perhaps the most interesting finding is the unsettled, and relatively recently opened, question of the extent to which school districts can contract away their responsibilities and authority. Because education is a state responsibility, there are fifty different statutory systems. State courts have varied widely in interpreting the district's right to contract over "policy" issues. The courts have cast considerable uncertainty over the legality of key provisions of negotiated contracts, both with employee groups and with other outside agencies. Court cases over the issue of contracting authority are certain to increase in the near future. In the process, education may be reminded of a long neglected fact: legally, the school district has closer ties to the state than to the community.

Education is no longer a self-governing community. Differences that once were settled out of courts are now the subject of litigation. Traditionally the courts have tended to maintain a hands-off attitude toward education on the assumption that state departments had the necessary authority. Now, however, the courts have become key agents of change in education.

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The Rationale

Social scientists frequently make a distinction between the base of a social system and the superstructure which evolves in support of the base. The base may be, as it is in education, a fundamental premise that defines operational relationships and invests authority. The superstructure is the pattern of institutions, laws, organizations, traditions, and habits that support, reinforce, and maintain the base. If new developments imply a new base for the system, the superstructure of the existing base acts as the major deterrent to change. When this type of power struggle arises, typical diffusion and adoption practices are of limited use because they are designed to bring about change within a given and accepted set of fundamental relationships.

When formal education evolved in the United States, assurances of quality instruction had to be obtained by relying on the credentials of the person responsible for instruction. For example, the classic Carnegie Unit is defined in terms of hours spent in a classroom with a teacher who has taken a specified number of college credits (defined in a similar manner) in an accredited institution. In other words, the fundamental premise -- the base -- of education is that responsibility and authority for instruction is vested in the person in face-to-face contact with students in a classroom. A superstructure has developed over the years to maintain and support this fundamental premise.

Technologically-based instruction poses a threat to the base of our present system and the more comprehensive the technology, the greater the threat. When instructional technology becomes sophisticated enough to be considered an alternate, rather than a complement, to traditional instruction, it becomes a base for the design of a new educational system. Certain publications and commission reports over the past five years have expressed disenchantment over the lack of impact of instructional technology on education while at the same time reaffirming

its potential real contributions to improved learning. Hooper[1], Molnar[2], and Oettinger[3,4] suggest, directly and indirectly, that the major problem is a failure to recognize the power struggle implied by the introduction of comprehensive technologies of instruction. Both the Commission on Instructional Technology and the Carnegie Commission on Higher Education reports stress the potential of instructional technology, with the former in particular pointing out that a major deterrent to extensive use may be the governing structure of education. The purpose of this study was to examine certain aspects of the governance of education to determine if such deterrents to educational technology do in fact exist.

Methodology

The method of inquiry uses a strategy that has been employed in the social sciences but not in education. The assumption that two antithetical systems are competing with each other emphasizes differences between the systems rather than similarities. In this way, obstacles to the challenging system are thrown into sharper relief. Once this is done, redesign of the established system can be undertaken with far greater understanding. Assuming that the competing systems are irreconcilable doesn't imply that revolution is the only possible way of resolving the conflict (as Marx, for example, believed). Accommodation as a very real choice would be in the tradition of how American society assimilates challenges to the system.

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[1]Richard Hooper. "A Diagnosis of Failure." 17 AV Communication Review. 245-264 (Fall 1969).

[2]Andrew R. Molnar. "Educational Technology -- The White Elephant." ERIC document ED 027 755. 20pp. 1969.

[3]Anthony Oettinger. Run, Computer, Run. Cambridge, MA: Harvard University Press. 1969.

[4]Anthony Oettinger. "Will Information Technologies Help Learning?" 74 Teachers College Record. 5-54 (September 1972).

This study was limited to the examination of legal aspects of selected elements in the superstructure of education: certification of teachers, accreditation of programs, state aid to schools, and professional negotiations. Only those aspects of the legal literature seen as obstacles to instructional technology were examined.

The Baumol Crunch and Forced Productivity

Professor Baumol of Princeton University has contended for some years that a number of operations in the public sector of the economy will be subject to pressures to increase productivity. He has maintained that there is a limit to the tolerance of the increasingly more productive segments of society toward those that are less productive. While this has always been true, relatively recent dramatic increases in industrial productivity have thrust the issue into prominence -- so much so that the pressures on the non-productive areas have been given the sobriquet, the Baumol Crunch.

The Baumol Crunch is manifested both through overt attitudinal expressions on the part of the productive sector and through inherent systemic relationships. An example of the former is the usual Chamber of Commerce member's belligerent query, "Why can't they run the schools like a business? We've developed more efficient ways of using resources; why can't the schools?"

However, the systemic relationships are the more critical. If the cost of doing business goes up, and the productivity of the institution stays the same, the Baumol Crunch will start to operate. The only alternatives for an institution like the schools are to charge more for services (in the form of increased taxes) or to seek other sources of funds.

Starting in 1958, the Federal government became a large enough source of funds to soften the Crunch. However, sharp curtailment of Federal monies in

the last few years has revealed the extent to which local funds have been out of balance with real costs.

Even in his more pessimistic moments, Baumol did not entertain the unusual situation that now pertains to the schools -- costs going up and productivity going down. Every time a teacher negotiating group forces a change in pupil/teacher ratios, while at the same time negotiating higher salaries, the Crunch is accelerated. For example, a few years ago, the Los Angeles schools had bond issues defeated four straight years, causing a severe financial squeeze. The teachers struck, but finally realizing that the financial situation of the Los Angeles schools prohibited granting their demands, the teachers rejected the offered compromise raise with the request that the money be used to reduce the teacher/pupil ratio -- a stipulation that could only exacerbate the condition the following year! When the current sharp increase in prices influences the next wave of contract negotiations, a collision course between taxpayer revolt, teacher demands and instructional productivity may become unavoidable.

While Baumol's argument was directed at public agencies in general, the schools are a particularly good fit to his conditions. In the private sector, if a company becomes marginal because it cannot increase productivity in the face of rising costs, it closes its doors, or changes product lines (unless, of course, Federal intervention as in the case of Lockheed rescues it). A company that <u>does</u> increase productivity is rewarded. The public schools have no way of dropping the marginal producer except during the probationary period, and even then marginal productivity is probably not an important criterion. Similarly, no formal method exists to reward increased productivity. (For these reasons, diffusion and adoption models from sectors of the economy, such as agriculture, that can drop out the marginal producer and reward productivity,

are inapplicable in education.) Increasing productivity would seem to be the only way out. But to do so will require management models that permit increased productivity to occur.

In order to do this, the teaching profession will have to come to terms with technological concepts and realize that increased productivity is the best route to real salary increases. In several places where teachers have accepted performance contracts, they have increased the number of students for whom they are responsible and have relied more heavily on technologies of instruction. In the one case (Gary, Indiana) where an entire school was taken over by a performance contractor, the ratio of professionals to paraprofessionals was reversed during the course of the contract. Here a differentiated staff with subsequent redefinition of roles made the program more cost-effective.

Roughly similar pressures have produced differing results in other professional fields. In pharmacy, they have changed the pharmacist from pill roller to pill dispenser. The knowledge and skill of the pharmacist have been incorporated into the industrial process. In medicine and dentistry, the doctor and dentist not only adopt new technology but also delegate low return (or low skill activities) to sub-specialties and retain only those tasks that are the high income (high skill) producers. Which model better fits education?

The differentiated staffing pattern can lead to a model roughly isomorphic with that of medicine. Ironically, while militant teacher groups have been opposed to differentiated staffing, the long range best interests of the teaching profession may lay there. As in the medicine model, differentiated staffing would keep instructional control within the local professional staff. But in order to do so, teachers will have to give up a number of long cherished myths, as well as accept the principle of merit pay. For example, they will have to

give up the myth that the professional in most direct contact with students is in the best position to determine their instructional needs.

Performance contracting and Individually Prescribed Instruction (IPI) are examples of the pharmacy model. "Prescriptions" (the word used by IPI) for learning sequences are prepared by a professional group not part of the local system. The "prescriptions" are dispensed by the local professional staff and modifications are either not permitted or carefully controlled. Productivity goes up because instructional development time can be amortized over many students and pupil/teacher ratios can increase.

Both models can increase instructional productivity but legal barriers are in the way. Perhaps an example of each model will serve to illustrate the point.

Probably the most extensive work productivity study of the classroom ever undertaken was conducted by Eaton H. Conant in the Portland (Oregon) public schools. In the introduction of the published report of his studies, Conant briefly discusses the development of specialization in the professions:[5]

> The history of development of professions indicates professional work efficiency is increased and more quality work done when professions increase specialization in their division of labor. Specialization in the professions is achieved in one of several ways. One of these ways is for less than professional trained personnel to assume the more nonprofessional and routine tasks of professionals. The efficiency gains that may result are realized for several reasons. Less costly nonprofessional labor is substituted for more costly professional labor to do the less demanding work. At the same time, professionals are freed to apply their specialized and more expensive talents to more important tasks.
>
> Several of the professions are well advanced in making application of these principles of specialization. In the medical arts, the employment of various levels of medical assistants has de-

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[5]Eaton H. Conant. Teacher and Paraprofessional Work Productivity. Lexington, MA: D. C. Heath & Company, 1973. Pp. 1-2.

> veloped so substantially in the last two decades that paramedical assistants are now regarded as conventional. However, in education the situation is not so far advanced. Only in the past decade, have several factors combined to stimulate school administrators to modify work patterns.

The key factor, Conant goes on to assert, is the rise in real wages of teachers in comparison to other labor and to steady levels of educational productivity, another manifestation of the Baumol Crunch.

> It is doubtful, however, if decisions to employ paraprofessionals in educational systems would have been made by employers if facilitating changes in the ratios of teacher and unskilled labor earnings had not developed in the economy in recent years. Reviews of any of the historical wage and earnings chronologies available in census and other government sources show that throughout the 1930s and most of the 1940s, the average annual earnings of public school teachers in the nation were nearly equal to the average annual earnings of unskilled workers. In the 1950s and throughout the period to the mid 1960s, teacher annual earnings made gradual but substantial relative improvement in comparison to unskilled worker earnings. By the mid 1960s, average teacher earnings had improved to near equality with the annual average for skilled workers in the economy and were several thousand dollars above levels for unskilled workers.
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> The implication of these changes is that until the 60s teacher labor could be purchased at levels of costs comparable to levels for unskilled labor, and there was no incentive for employers to consider specialization of the teaching division of labor and substitution of unskilled labor for teacher labor. Only after teachers achieved a skilled labor cost differential in the 60s were potential cost savings advantages available. Employer pursuit of this advantage has also been facilitated by the abundant labor supply of secondary labor force women in less skilled categories that surveys have identified during these years. This network of broader economic relationships has provided incentives and opportunities for educational employers to use less skilled paraprofessional labor commending in the 60s. In addition, more particular economic pressures have operated within this larger framework to stimulate employers to modify the traditional teaching division of labor.
>
> Educational managers are required to acknowledge the fact that theirs is a labor-intensive service industry where labor costs of instruction are typically in excess of 70 percent of the total costs represented in annual operating budgets. The magnitude of labor costs as a proportion of all operating costs

> has forced managers to be very sensitive to changes in teacher salary costs. For some time now, administrators have faced the dilemma that special groups have demanded more effective educational services, even while voters in general have frequently refused to vote affirmatively for budget increases. Voter failures to approve budgets have peaked in recent years, moreover, at the same time that more militant teachers have gained increased effectiveness in applying bargaining pressures to gain earnings raises. Because they have been placed in circumstances where labor costs have increased while public financial support has declined, administrators have had to consider basic alternatives to conventional methods of delivering instruction. One choice has been an instructional work system, utilizing professionals and paraprofessionals, that may deliver more effective instruction at reduced unit labor costs.

Conant, a professor of business administration, experimented with different professional and paraprofessional work arrangements in order to make the best use of professional teacher time for instructional purposes. His analyses of typical classrooms had revealed that remarkably little teacher time was normally devoted to instruction. His subsequent studies demonstrated that the use of paraprofessionals could give teachers more time and could lead to more cost-effective production but a significant change would have to take place in the relation of professional to class assignment.[6]

> These study results for teachers imply that teacher work roles, and the organizational modes that support these roles, will have to be significantly changed if the division of labor is to be redesigned to achieve more professional work. The results further suggest that changes in teacher work roles will have to divorce the professionals' instructional tasks from conventional class homeroom settings where considerable time is spent monitoring behavior of children, doing housekeeping, and other nonprofessional work. It seems almost certain, in fact, that if teachers are not taken out of their homeroom class roles and given greater opportunity to be full-time teaching specialists, then there will be few other ways to permit them to function as professionals.
>
> Nothing the research team observed in many days of work in the schools indicated conclusively why it is necessary to assign professional teachers to homeroom classes. None of the tasks associated with the noninstructional tasks of a homeroom monitor require pro-

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[6]Id., pp. 63-64.

fessional judgment. And everything we observed about the character and capabilities of paraprofessionals suggests that they could very successfully perform these roles. The homeroom monitor and housekeeping role requires maturity and good judgment, but professional task requirements are close to nil.

If there is one recommendation that emerges clearly for practical implementation from the work study, it is that schools experiment more with staff assignment plans that place paraprofessionals full time in the homeroom role while teachers function as full-time instructors who visit classes during the day primarily to teach. Staffing arrangements along these lines would instill a clear demarcation between instructional and noninstructional work, and make a clean break from conventional roles. Teachers would not necessarily be placed in an interaction status that is too remote from children because teachers would no longer work all day in "homerooms." In such a system, teachers could have more interaction, and more important interaction, as their instruction for children increased. Paraprofessionals, for their part, would function as monitors, prepare classes for teacher visitations, and also contribute additional instruction in the time they have remaining from more routine work. The general nature of the work study results clearly implies that if something like these new roles are not arranged in schools, professional work productivity of teachers will remain under the handicap of excessive nonprofessional tasks.

Conant acknowledges he had to accept the professional staffing pattern of the school district, drastically reducing his flexibility. Considering this and his findings, it is surprising that he does not comment on the restrictive nature of certification requirements or teacher association demands. Perhaps he didn't because the project was funded with Federal money as part of the compensatory education program. Federal money was used to augment the staff of paraprofessionals. In any event, Oregon happens to be one of the few states in which pupil/certificated teacher ratios are specifically set by the State Board of Education. Neither the real savings nor the educational benefits that could result from Conant's study could be realized by Oregon school districts.

The problem of not being able to modify professional staffing ratios has been an obstacle to many potentially cost-effective innovations, IPI included. The actual instructional sequences necessary for students to achieve instructional

objectives are designed into the IPI materials. Presumably redistribution of professional personnel with consequent increased productivity would seem to be a logical outcome of IPI's installation in a school.

In August, 1973, the Office of Education sponsored a conference on "Improving Productivity of School Systems Through Educational Technology."[7] In his presentation, Robert Scanlon displayed a table showing how much money adoption of IPI had added to the cost per child in a variety of schools. He acknowledged during the question period that IPI represented add-on costs because no changes were made in staffing. Then he was asked if a school and its staff were designed from scratch, would use of IPI still be an additive cost. His response was that IPI would result in cost reduction because pupil/teacher ratios and paraprofessional/certificated teacher ratios would both be affected favorably in relation to cost. In his presentation at the same conference, Heinich suggested that the Federal government support a demonstration project in which an entire school would be designed, constructed, and staffed on the basis of demonstrated technologies of instruction such as IPI, television, CAI, etc. to determine what are the best staffing arrangements to arrive at cost-effective programs. Unless this approach is used, any comprehensive applications of technology for cost-effective purposes will run into protective staffing patterns.

Education and the Courts

There is no question that the courts are becoming more involved in matters of education, but so far they have tended not to enter into disputes between state agencies and school districts in reference to the issues of interest to the project. Most recent court decisions have centered on constitutional ques-

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[7] R. G. Scanlon and J. Weinberger. Improving Productivity of School Systems Through Educational Technology. Philadelphia: Research for Better Schools, Inc. 1973.

tions of rights of individuals, or, in the state courts, on rights of individuals under contract.

The paucity of cases that have been brought into state courts seems to be related to the tradition of education being a self-governing community. The courts have been reluctant to enter into policy disputes unless there is a clear violation of state law. Where there is no state law governing a specific issue, the courts have tended to assume that the state boards have been delegated the necessary authority. (At times the state courts have accorded more power to state officials than they cared to have.) In this kind of situation, local school administrators tend to regard state administrative decisions as "law." If an action by a district is questioned by the state agency, the district tends not to go to court to settle the issue, but, rather, negotiate an agreeable settlement with the agency. (A very pertinent example of how this works is discussed below under Certification.)

However, this may be changing. When the concept of in loco parentis was abandoned, educational institutions were subject to suits by students over violations of individual rights. The most recent instance is the U. S. Supreme Court decision that students cannot be suspended from school without a hearing. This decision following on the heels of decisions involving dress codes, student publications, rights of privacy, etc., would seem to spell out a whole new Bill of Rights for students.

Now that the shell of self-governance has been cracked, other aspects of institutional privilege may be due for questioning. A young man in the San Francisco area is sueing the school district because he has a high school diploma but can't read. A woman has brought suit against the University of Bridgeport (Connecticut) alleging that the course she took was nothing like the catalog description. Cases such as these get closer to the heart of the

questions posed by this study. Once the area of policy decisions has been entered into, the whole structure of educational governance may be re-examined. This has happened in the area of school finance as reported under State Financial Aid.

One other important factor must be mentioned. Up to about fifteen years ago, administrators and teachers tended to share professional goals. Administrators were reluctant to press certain issues because of professional loyalty. Since then, however, the "united" profession posture has been eroded by continuously increasing teacher militancy. Administrators and teachers have parted company in professional associations and often at the bargaining table. Without the support of superintendents, teachers are going to be faced with more challenges to previously accepted policies (and vice versa). The concept of the self-governing community was valid only as long as education was a community. An example of how interests now divide on the issue of pupil/teacher ratios is given in the section on Professional Negotiations.

Certification

Certification can be divided into two parts. The first has to do with the authority of the state to license. This is not questioned. The second has to do with the authority of the state to prescribe the number of licensees, or certificated teachers, a school district must hire. The state does not prescribe the number of licensed physicians, plumbers, barbers, etc., a town must have, but it often assumes the authority to specify by some formula the number of certificated teachers a school district needs. In one way or another this is usually done by specifying a pupil/certificated teacher ratio. Sometimes the specification is made through the state school aid formula, sometimes by state agency policy.

The rationale of this study holds that requirements of certificated teachers in ratio with specified numbers of students can discourage introduction of technology. Generally, the state departments of public instruction assume that the authority to specify pupil/teacher ratios is an extension of the state's authority to license. Because of the tendency of the courts not to question the state's authority in these matters, administrators accept state department rulings as having the force of law. On the other hand, state departments often have been willing to "settle out of court" rather than risk a challenge that might lead a court to rule in favor of the district. The case of Addison Trail High School, Addison, Illinois, is an excellent illustration of how this process works.

In Fall 1971, Addison Trail High School faced a typical situation: one more typing class than staff could teach. After clearing the procedure with appropriate county and state officials, the high school started teaching the extra typing class by closed-circuit television with a paraprofessional overseeing the TV class.[8] The local teacher association protested the action to the state department. After due deliberation, the state department notified the district that it could continue the class for that school year but it would have to stop at that time. In the meantime, the state department would obtain a legal interpretation on the use of teacher aides. In June, 1972, the state department notified the high school that the legal interpretation prohibited use of non-certificated personnel in a situation requiring instructional judgment or evaluation unless under the immediate supervision of a certificated teacher. Immediate supervision was interpreted to mean <u>in the same classroom</u>. Note that this was a legal interpretation by the state, not by a court.

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[8]All information about Addison Trail was obtained through correspondence and interviews with the principal of the school.

The district continued negotiating with the state department with some success. In June, 1973 (one year later), the state department reiterated that the definition of supervision in its Formal Legal Opinion Number 8 did not extend to the use of non-certificated personnel as described in the high school's proposal. However, the state department went on in the next sentence to apprise the high school of new state regulations, approved February, 1973, regarding the use of non-certificated personnel. Under the new regulations, the state department was able to approve the high school's program for the 1973-74 school year! Two provisions in the new regulations enabled the high school to continue its program. First, immediate supervision was redefined to mean continuous management of the teacher aide's activities. Second, the qualifications for a teacher aide included the stipulation of at least thirty semester hours of college credit. The individual used by the district attended college three years.

By satisfying the immediate demand, the state department in effect kept the innovation localized and eliminated the need for the district to sue. Although the district could have sought redress in the courts, the district was not interested in pursuing a point of "law"; it simply wanted to teach a class by TV. Because the legal question was not settled in court, the June, 1973, letter from the state department begs the question: If another high school in Illinois wants to introduce a similar program, will the state department quote Formal Legal Opinion Number 8 or the February, 1973 regulations?

Perhaps because of this "quasi-law" approach to certification, we found not a single litigation that challenged the authority of the state to set staffing standards. But can the state department presume to specify staff requirements of a school district? The question is asked this way because that's the context in which the legal issue may be raised. Shouldn't the school's effectiveness be based on output rather than input? It so happens that the

students in the TV class performed slightly better than the students in the class taught directly.

Other key issues in the question of impact of certification on instructional technology are: What constitutes supervision, and how may supervision be managed. Hoban once stated, "In forty years, this concept of [instructional technology] in education has grown from one of a device for a lesson presentation to one of a complete system of remotely controlled instruction covering an entire course."[9] In the Addison Trail instance, television was the instrument through which "instruction covering an entire course" was "remotely controlled." If all instructional requirements are incorporated into the TV lessons, and if the teacher aide is simply carrying out instructions from the TV teacher, and, finally, if evaluation of the students is planned and executed by the TV teaching staff, then any certification requirements should apply to the TV teacher, not the individual, non-certificated or certificated, physically present in the classroom. The California law that spells out distribution of state aid to community colleges has changed over the years from direct supervision to indirect supervision of paraprofessionals by certificated staff. A great deal of the pressure for change was the installation of audio-tutorial techniques and televised instruction. In both, the efforts of certificated personnel are incorporated in the materials; the paraprofessionals are used to make sure the system functions. This is the context in which a school district may challenge most directly any pupil/certificated teacher staffing requirements.

In the Conant study cited earlier, Conant stated that increased productivity, and increased instructional effectiveness, would result from arranging to keep

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[9]Charles F. Hoban. "The Usable Residue of Educational Film Research," in New Teaching Aids for the American Classroom. Institute for Communications Research, Stanford University, 1960.

the professional teachers from having too much direct contact with classrooms and students. By not having constant, direct supervision of paraprofessionals, the teachers could become more effective.

The larger context in which the capabilities of instructional technology and certification requirements clash is admittedly much thornier. What if the TV lessons in Addison Trail were on video tape instead of live, or in the form of programed instruction? Because such instruction is repeatable, assurances of quality can be secured by actual use; assurance need not be based on the qualifications of the personnel preparing the instruction, nor on who is in the classroom. In instances of this kind, problems arise not only of certification, but also of accreditation and state aid, both of which follow.

Accreditation

Examination of the standards for schools published by the regional accrediting associations reveals a definite "biasing" in reference to staffing requirements. For a variety of reasons, high schools want to be accredited and the easiest way to gain accreditation is to follow precisely the report forms of the accrediting associations. Doing so requires a specific pupil/certificated teacher ratio. Departure from this norm requires considerable explanation and documentation, delaying a favorable report. The onus is definitely on the innovator. In other words, the "good" program (the one that requires no justification except compliance) is the one that follows the guidelines. Any departure is suspect. Not that departures don't occur. They do and are often approved. However, from the project's point of view, technologically-based instruction will be questioned while the same instruction delivered by a classroom teacher will not. While the Carnegie Unit may not be the only way instruction will be measured by an accrediting association, it is the only way that is accepted without question.

When programed instruction was first introduced into the schools, perhaps the most severe obstacle to acceptance was the tradition of using time in class as a standard rather than achievement. In traditional instruction, time is constant (the numbers of hours spent in class) and achievement is variable (the grading system). In programed instruction, time is variable and achievement relatively constant. Again, in accreditation practices emphasis is on input rather than output.

In addition to regional accreditation requirements, schools may have to adhere to state accreditation. The force of state accreditation may be exercised (as in the case of certification) through state financial aid. Obviously, this is an important lever with which to force compliance with state department policy in regard to staffing.

According to a state representative of the North Central Association, the Federal government is now using the accreditation association's evaluations as the basis for distributing occupational and vocational training funds. Faced with the enormous problem of having to decide which high school programs are worthy of support, the Federal government, understandably, is willing to accept the judgments of the association to which the high schools already voluntarily belong. However, it serves to strengthen the position of the accrediting associations, thereby reinforcing the importance of input measures and may make technological innovation even more difficult.

However, the legal status of accrediting practices is the main concern here. The legal status of a voluntary association is quite different from that of a state accrediting agency.

With slight variations among individual accrediting agencies the general procedure for accreditation is as follows:

1. the association establishes certain minimum standards which each educational institution must meet in order to receive accreditation;
2. representatives of the association visit each institution to observe and interview;
3. the information obtained in addition to data submitted by the school itself following a process of self-analysis, is presented to a review committee;
4. accreditation is granted or denied, each decision being appealable to a higher internal body.

It is the standards under step 1 above which generally provide the greatest obstacle to innovation. The best example of this relates to teacher/pupil ratios. Of the six accrediting agencies for secondary schools,[10] three explicitly require that the overall ratio of students enrolled in a school to classroom teachers be 25 to 1 or less.[11] Teachers' aides and interns may be counted in the ratio as a fraction of a teacher (1/3 to 2/3 depending on degree of training). The Southern Association limits such use to 10% of the professional staff. The North Central Association allows exception to its 25 to 1 ratio where evidence is submitted that teachers are regularly provided with clerical and/or paraprofessional help for non-teaching duties, but otherwise does not credit paraprofessional help. The three associations not using ratios require reply to general questions such as "Is the number of staff members adequate for the educational program?" and

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[10]North Central Association of Colleges and Secondary Schools; Northwest Association of Secondary and Higher Schools; Western Association of Schools and Colleges; Southern Association of Colleges and Schools; New England Association of Colleges and Secondary Schools; and the Middle States Association of Colleges and Secondary Schools.

[11]See Southern Association, Principle E, Standard 2(a); Northwest Association, Standard IX; North Central Association, Standard 4.60.

"Are the teaching load and total working load such that maximum efficiency in service is maintained?"[12] Such questions of course leave a great deal to individual perceptions and conceivably could also present obstacles to technological innovation should the right (or wrong) individual play an important role in the accreditation process.

It should be noted that the associations explicitly encourage innovation. For example, Principle I of the Southern Association states: "Member schools are encouraged to carry on active experimental programs designed to improve the school." The comments to the Principle go on to state that "innovation and experimentation which serve the needs of students and which are well-planned, effectively implemented, and thoroughly evaluated should in no way jeopardize the accredited status of a member school." When an experimental design is at variance with the standards of the association, a proposed study must be submitted to the State Committee for approval prior to implementation of the experiment. Similar procedures are used by the other associations to control the circumstances of innovation by their members. The burden of persuasion is clearly on the innovative.

What legal challenges might be used against the actions of accrediting agencies?[13] The educational accrediting agency is a private, non-profit, voluntary association. The common law on voluntary associations is reasonably well-developed. Generally, courts have not interfered with the internal affairs of such associations because they are private, voluntary, and operate in areas of little concern to the public.[14] Non-members have no enforceable right to member-

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[12]Middle States Association, Standard 8.

[13]Heavy reliance in this discussion was placed on the Comment, "The Legal Status of the Educational Accrediting Agency: Problems in Judicial Supervision and Governmental Regulation." 52 Cornell Law Quarterly 104(1966).

[14]See generally Annot. 175 A.L.R. 438, 506(1948).

ship. Members being expelled might have an action in contract but membership implies acceptance of the association rules and these rules then become a part of the contract. Once again judicial relief is precluded. However, for reasons to be developed below, these principles of law in this area are too broad to control completely the extent to which educational accrediting agencies should be supervised by the courts.

Accrediting agencies may be excepted from the above common law because their actions are intimately tied up with the public interest, an aspect not generally found in voluntary associations. This distinction is developed more fully in the following quote from the article in the Cornell Law Quarterly:[15]

> When a private association is the only group operating in an area of vital public concern, it enjoys a sort of monopoly power; if that power, because of public reliance upon it, becomes great enough to make membership a necessity for successful operation in that area, courts may intervene. If the applicant meets the admission standards of the group -- at least insofar as they are not contrary to public policy -- and his admission would not subvert the group's basic purposes, the granting of membership in the association may be compelled. This principle has been applied to labor unions and professional associations, and similar reasoning may well be applicable to educational accrediting associations. Society has come to rely on accreditation as a means of judging the quality of education; employers, schools, and especially state licensing boards now depend heavily upon educational standards maintained through the process of accreditation.

The question then is how "unjust" or "arbitrary" the refusal must be to warrant intervention.

Before judicial intervention will be warranted, however, an aggrieved party must show that it has exhausted all remedies available within the framework of the association. This requirement may provide the major stumbling block to obtaining judicial relief in the area of educational innovation. As was mentioned above, while the innovator must go to extra lengths to obtain accreditation, the

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[15]Supra, n 13, pp. 113-4.

procedures are available within the associations to obtain approval. Denials of accreditation also may be appealed within the association. In fact, the National Commission on Accrediting requires as a condition for recognition that an association provide "a regular means whereby the chief administrative officer of an institution may appeal to the final authority within that agency."[16] Should such internal appeals bear unsatisfactory results for the innovator, judicial relief might then be sought. The court faced with questions concerning an accrediting agency has a number of factors to balance. The quasi-public nature of the association and adverse affect on the public from that agency's actions is one consideration. In addition, the extreme consequences of disaccreditation on a school might make a court more inclined to interfere than in the case of other private associations. On the other hand, the court might seek to preserve the autonomy of the agency and defer to its special competence when there is a close call to be made -- the situation present whenever technological innovation in education is the issue. In the few cases available in this area the latter considerations have proved determinative. For example, in North Dakota v North Central Association of Colleges and Secondary Schools[17] an injunction was sought to restrain the Association from withdrawing the accreditation of a state college. Such withdrawal was threatened because an investigation had shown that firings of faculty at the school allegedly without cause and without opportunity to be heard had affected faculty morale. The Court denied the injunction, concluding that "in the absence of fraud, collusion, arbitrariness, or breach of contract, such as to give rise to a civil action, the decisions of such voluntary associations must be accepted as conclusive."[18]

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[16]National Commission on Accrediting. Facts About the Commission: Criteria for Recognized Accrediting Agencies. U. S. Office of Education. 1964.

[17]23 F. Supp. 694 (E.D. Ill.), Aff'd 99 F2d. 697 (7th Cir. 1938).

[18]Id. at 699.

The most recent accreditation case, and perhaps the most important in defining the relationship between the courts and accreditation associations, is the Marjorie Webster Junior College case.[19] In that case a standard of "non-profit" operation before accreditation was attacked both as a violation of the Sherman Anti-Trust Act and as a denial of due process. On the first challenge the court said that incidental restraint of trade, absent an intent to effect the commercial aspect of the liberal arts or learned professions was not sufficient to warrant application of the anti-trust laws to the arts and learned professions. The discussion of the due process charge by the court is especially significant. Ruling once again in favor of the accreditation agency, the court layed down some guidelines for judicial intervention in educational accreditation affairs. Relevant considerations were the extent of the association's control of the field, the extent of potential harm which could be attributed to lack of accreditation, and whether the standards challenged were being applied in an evenhanded fashion. Then the court went on to say that the extent of judicial power to regulate standards set by private professional associations must be related to the necessity for judicial intervention, meaning that the extent to which deference is due to the professional judgment of the association will vary both with the subject matter at issue and the degree of harm resulting from the association's actions. Therefore, less deference may be due professional judgment when the question is not one of substantive standards but rather one concerning fairness of procedures by which the challenged determination was reached. The opinion seems to say that the internal mechanism for adopting standards will be vulnerable to charges of inadequacy if standards are not adopted by the exercise of the wise and considered judgment of experienced, non-

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[19] Marjorie Webster Junior College v Middle States Association of Colleges and Secondary Schools, 432 F.2d. 650 (D.C. Cir. 1970), cert. den 400 U. S. 965 (1970).

partisan and imaginative officials who accord a full measure of opportunity to be heard to those who will be expected to conform to the standards.

Where then does this leave the school that wishes to adopt a program involving instructional technology and still retain its accreditation? It is unlikely there will be any recourse to the courts. While the standards used by accrediting associations may work against such innovation, the procedures are available to gain approval for such a program. Such innovation is not prohibited by the accrediting associations and therefore there is little possibility of a lawsuit being successful.

State School Aid

Ten years ago, when the senior author first started considering the relationship of the governance of education to instructional technology, he soon discovered that many state aid formulas acted to "bias" staffing requirements of school districts. While state aid was ostensibly on a per pupil basis, in reality the amount of aid depended on some form of classroom or instructional unit. A district could maximize its state aid by complying with the state formula of certificated staff to pupils. As one might expect, in states basing aid on instructional or classroom units, state departments relied on the aid formula to enforce certification requirements. In other words, the presumed authority of the state to specify the number of certificated personnel a district must hire was implemented through state aid formulas.[20] Formulas of this kind are considered by this study to be anti-technology because they force staffing patterns not based on a considered deployment of resources in relation to output.

At the start of the project, we began to document states in which such formulas were used. However, we soon discovered that the standard literature

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[20] In states where "teacher" is broadly defined, districts tend to require all professional personnel to be certificated. For example, degreed social workers may have to get certificated as teachers before districts will hire them.

on state aid is out of date. We have found that no area of education governance is in as great a condition of flux as state aid. The Serrano, Rodriguez, and similar decisions have caused a number of states to re-examine the whole structure of school funding. The responses to court demands for review have so far tended to produce state aid formulas potentially far more conducive to technologically-based instruction than the ones they are replacing. The new formulas are based on a concept of "equal yield" rather than on instructional units. The state guarantees that each district will wind up with the same amount of money per student for each mil levied. Because the directives of the courts have stressed support for students, the new formulas have dropped references to certificated staff. So far, fourteen states have commissioned extensive reviews of their state aid formulas. Most of these have enacted new state aid legislation based on the commissioned reviews. Several more years will have to elapse before an assessment of the new state aid laws can be made, because many if not all will be challenged in the courts. For example, the new Kansas law has been ruled unconstitutional by the State Supreme Court and is in process of revision.

An excellent example of the effect of the "new" legislation is found in an analysis of an act passed by the legislature of the State of Maine. On page 39 under the heading "Incentive provisions" appears the following:[21]

Class Size

> No reference appears in the act relative to class size. A former provision is repealed which mandated that each unit employ at least one teacher for each thirty elementary pupils in average daily membership except in the kindergarten where the ratio shall not exceed one teacher to sixty pupils and at least one teacher for each twenty-five high school pupils.

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[21] Kermit S. Nickerson. "An Idea Whose Time Has Come: Analysis of an Act Equalizing the Financial Support of School Units." Mimeographed. State of Maine. 1973.

If the new approach to state finance continues to omit the classroom or instructional unit as a means of determining state school aid, a traditional lever of enforcement of staffing requirements will be disappearing. However, as will be pointed out under Professional Negotiations, the teacher associations are ready to take over protective action.

In states still retaining some state aid based on certificated staff, the California model, cited earlier, is the one to follow. If students and paraprofessionals are under the direct or indirect supervision of certificated staff, then the instructional unit is counted for state aid.

The question of whether the state may legally withhold state funds in order to enforce certain state requirements has not been settled. In Ohio, the Ohio Appelate Court ruled against the Ohio State Department's withholding of state aid because a local school district did not obey a directive to close a school.[22] The Ohio statute in force at the time stated:

> If upon the examination of the situation in any school district the Director of Education is satisfied that any adjustments or changes in local school policy and administration should be made as a condition of participation in the state educational fund, he may order such adjustments and changes to be made.

This certainly gave the State Director broad powers. However, the court held that the exercise of that authority had taken away the local board's discretionary right and prevented the local board from using independent judgment. Two years later the Ohio legislature modified the statute in question. While the right to withhold funds was maintained, the legislature limited the conditions under which funds could be withheld and provided a mechanism for the local board to seek exceptions.[23] The author goes on to cite several other cases in which the

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[22] Christman v State, 45 Ohio App. 541, 187 N.E. 584, (1932).

[23] R. R. Hamilton. The Bi-Weekly School Law Letter, University of Wyoming, January 7, 1954.

courts denied the state the right to withhold state funds to force compliance with state regulations. He concludes with the statement that the courts often have prevented states from influencing local school policy by denying state funds.

However, in a case in Washington state, the court upheld the State Board of Education when it withheld state funds to a school district because the State Superintendent denied the district approval and accreditation of a projected high school.[24] But the central issue was whether an elementary school district could build a high school in an area already adequately served by other high school districts. The issue, therefore, was not control over ongoing school policy.

In summary, the courts may look with favor on school district challenges to the power of a state department of education to withhold funds in order to force compliance with either pupil/teacher ratios or state accreditation where the school district can show that departures from requirements are programmatically sound.

Professional Negotiations

The teacher associations are taking over from state aid as the chief protectors of the status quo in regard to certification. As would be expected, the teacher associations see staffing requirements tied to certification as a professional necessity. As revealed by an examination of model contracts published by the National Education Association, the associations are firmly holding on to a "labor intensive" concept of staffing. Recommendations in relation to class size and maximum total pupils contacted place severe limitations on seeking cost-effectiveness through technology. Opposition to differen-

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[24] Dupont-Fort Lewis School District No. 7 v Bruno, 79 Wash. 2d 736, 489 P. 2d 171 (1971).

tiated staffing arrangements and tight restrictions on any instructional activities of paraprofessionals support the labor intensive outlook of teacher groups. In times of economic stress, negotiations tend to protect the "hard-core" professional staff by sacrificing what they regard as expendable program elements, and by cutting down on non-professional staff.

If viewed from an historical perspective, teacher associations are a blend of guild and craft union. The traditional posture of education as a self-governing society encourages a guild type structure. The guilds were self-governing, the members set standards of admission, a limit was placed on the number of workers a master could hire, disputes were settled internally, and reliance was placed on passing on of skills (a body of common practice) rather than on technology. It is easy to see how industrialism could not develop fully until the restrictions imposed by the guilds were overcome. Aspects of this historical analogy can, of course, be extended into the current educational setting.

In regard to the history of unionism, teacher associations would appear to be going through a stage analogous to craft unionism of fifty or so years ago. Demands are governed by short-term goals focused on immediate welfare gains. This may be a necessary stage to go through in order to secure a base from which departures from practice can then be made. In any event, as mentioned before, current negotiations are making education more labor intensive in the face of rising costs.

Since the 1950s when the first state laws were passed granting public employees the right to negotiate with their employers, at least thirty-four states have decided to permit public employer-employee negotiations.[25]

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[25]P. Blair. "State Legislature Control Over the Conditions of Public Employment in Defining the Scope of Collective Bargaining for State and Municipal Employees," 26 Vand. L. Rev. 1, 3-4 n. 18 (1973).

Significantly affected by this movement have been teachers in their contractual negotiations with school boards. Rarely limited to wage concerns, these negotiations have been used by teachers to achieve various professional goals.[26] The extent to which the demands of teachers in these negotiations present possible obstructions to the use of innovative educational technology and the extent to which these demands are being agreed to will be the limited concern of this section.

The growth of public employer-employee collective bargaining has been slowed by fears concerning the effects such bargaining will have on the ability of the public employer to formulate public policy. This section will attempt to ascertain the extent to which the use of educational technology has been considered such a policy determination. The various state statutes have handled this problem of educational policy differently. At one extreme, the public employer is obligated to "meet and confer" on a non-binding agreement.[27] At the other extreme the statutes apparently authorize wide-open negotiations on a binding contract.[28] The liberal treatment in the latter type of statute is usually restricted in varying degrees by both administrative ruling and judicial decision.[29] In

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[26]See generally, D. L. Kirp. "Collective Bargaining in Education: Professionals as a Political Interest Group." 21 J. Pub. Law 323 (1972).

[27]See e.g., Cal. Gov't Code §3500 (West. Supp. 1974).

[28]See e.g., N.Y. Civ. Ser. Law art. 14 (McKinney 1973).

[29]On the ultimate effect of the statute involved on the contents of agreements, see "Teacher Collective Bargaining -- Who Runs the Schools?" 2 Fordham Urban L. J. 505 (Spring, 1974).

between are those statutes which expressly limit the scope of bargaining.[30] With the different statutory treatments present, one would expect the effect teachers have on the formulation of policy to vary considerably; however, at least one empirical study, a comparison of teacher contracts in a "meet and confer" state with those in a "wide-open negotiations" state, concludes that the restrictiveness of the statute does not seriously affect the role the teachers play in the making of educational policy.[31] In both states that role was a substantial one. The potential effect of teacher collective bargaining on technological innovation in education, therefore, cannot be ignored.

What are the impediments to innovation caused by the demands of teachers? Perhaps the primary one regards pupil/teacher ratios. That such ratios are considered important by teachers is clear. A recent handbook containing model language to be used by teachers in bargaining suggests a number of clauses on this subject, the general drift of which is to limit the ratio of pupils to total classroom teachers within a district to 25 to 1 with teachers being paid on a prorated basis for pupils in excess of the ratio.[32] Such ratios if accepted

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[30]Nev. Rev. Stat. §288.150 (1973) reads: "Each local government employer is entitled, without negotiation: (a) To direct its employees; (b) To hire, promote, classify, transfer, assign, retain, suspend, demote, discharge or take disciplinary action against any employee; (c) To relieve any employee from duty because of lack of work or for any other legitimate reason; (d) To maintain the efficiency of its governmental operations; (e) To determine the methods, means and personnel by which its operations are to be conducted; and (f) To take whatever actions may be necessary to carry out its responsibilities in situations of emergency. Any action taken under the provisions of this subsection shall not be construed as a failure to negotiate in good faith." Also see Montana Statutes, H.B. 455 1971L which reads ". . .The matters of negotiation and bargaining for agreement shall not include matters of curriculum, policy of operation, selection of teachers and other personnel, or physical plant of schools or other school facilities."

[31]"Teacher Collective Bargaining -- Who Runs the Schools," supra, n 29, p. 569.

[32]Roger P. Kuhn. "Not for Granted: Language for Teacher Collective Bargaining Contracts." California Teachers Association, Southern Section, 1125 W. Sixth St., Los Angeles, CA 90017. 1971.

by the school boards clearly work against technological innovation by locking the school system into a certified teacher-25-pupil-per-classroom structure. The danger is that Boards of Education will naively agree to such ratios without considering their impact. Such was the case in contract negotiations in a New Jersey city. The article agreed upon read: "The goal for class size will be to maintain academic classes not in excess of 25 pupils. Immediate steps will be taken to assure that no academic class will be maintained at a level in excess of 30 pupils for the school year 1970-71." The school board was unable to fulfill such a promise and the teachers' association filed a grievance. The grievance went to binding arbitration under a contractual provision. Because of the article's clear language, the arbitrator ruled against the board and ordered it to comply fully with its class size article within 45 days after the issuance of his decision.[33]

As indicated above, teacher groups have been attempting to negotiate a monetary penalty from the district when ratios exceed a specified amount. The strategy is that if a state has prohibited negotiation in regard to class size, the negotiable penalty clause would have the same effect. This has happened in Michigan. The courts have not ruled as to whether such penalties are simply another way of negotiating class size.

Must school boards negotiate the issue of pupil/teacher ratios? The decisions of the courts conflict somewhat but the clear trend is to make such ratios non-mandatory bargaining items; that is, the school board can bargain on these issues if it wishes but need not as such issues are considered within the area of managerial policy. In only one instance has it been expressly held that pupil/teacher ratios are so closely related to the terms and conditions of employment

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[33]Trenton Education Association and Trenton Board of Education (AAA Case No. 14-39-0203-71-J, Jan. 14, 1972).

that they must be bargained over by school boards.[34] The courts and/or administrative agencies of Pennsylvania,[35] Nebraska,[36] and New York[37] have held that class size and ratios are either nonbargainable or at least non-mandatorily bargainable. The treatment of this matter by the New York courts is interesting. Originally the Court of Appeals favored the "wide-open" approach to negotiations. A 1972 decision held that any matter connected with terms and conditions of employment must be regarded as a negotiable issue unless some State statute contains an explicit prohibition against bargaining on it.[38] The court rejected the contention that a public agency is prohibited from negotiating on any subject unless the law expressly requires it to negotiate. Then in 1974 the Court of Appeals upheld a lower court decision that class size is an item upon which the school board need not bargain.[39] The thrust of the decision is that class size is a basic element of educational policy and that such decisions should not be made over a negotiating table but rather should be made by those having the

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[34]Washoe County School District and Washoe County Teachers Association (Nev. Local Gov't Employee-Management Rel. Bd., Oct. 9, 1971).

[35]Penn. Labor Rel. Bd. v State College Area School District The Board of Directors, Case No. PERA 0-828-0 (Oct. 1971).

[36]In School District of Seward Education Association v School District of Seward 199 N.W. 2d 752 (Neb. 1972) at 757, the Nebraska Supreme Court stated: "Without trying to lay down any specific rule, we would hold that conditions of employment can be interpreted to include only those matters directly affecting the teacher's welfare. Without attempting in any way to be specific, or to limit the foregoing, we would consider the following to be exclusively within the management perogative: The right to hire; to maintain order and efficiency; to schedule work; to control transfers and assignments; to determine what extracurricular activities may be supported or sponsored; and to determine the curriculum, class size, and types of specialists to be employed."

[37]West Irondequoit Teachers Association v Helsby, 346 N.Y.S. 2d 418, 42 A.D. 2d 208 (1973); affm'd 35 N.Y. 2d 49, 358 N.Y.S. 2d (1974).

[38]Board of Education of Huntington v Associated Teachers of Huntington, 30 N.Y. 2d 122, 282 N.E. 2d 109 (1972).

[39]See supra, n 37.

direct and sole responsibility therefor. Read with the earlier case, the courts appear to have concluded that matters of educational policy, such as class size, need not be bargained over by school boards but should such an agreement be reached it will become enforceable. Such a reading is consistent with an earlier ruling by New York's Public Employment Relations Board.[40] The impact of these rulings in New York is somewhat unclear, but the results of a recent study of teacher employment contracts in New York suggest that the school boards' inclination to enter into negotiations on class size has been little affected.[41] Over half the contracts studied contained a class size provision.

Teachers are also making themselves heard on this issue in California. In the study mentioned above approximately three-fourths of all teacher employment agreements in that state were found to contain a class size clause.[42] This is interesting in light of the fact that there is some case law within the state to the effect that a school board does not have legal authority to enter a binding agreement on educational policy matters.[43] If class size is considered a matter of educational policy, as it generally is, then these provisions are unenforceable. Nevertheless it is significant that such a large percentage of the school boards agreed to these clauses in the first place. It is perhaps reflective of the liberal "meet and confer" type of statute under which employ-

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[40] City School District v New Rochelle Federation of Teachers, 4 P.E.R.B. 3060 (1971).

[41] "Teacher Collective Bargaining -- Who Runs the Schools," supra, n 29, p. 553.

[42] Id., p. 554.

[43] Hayes v Association of Classroom Teachers, 76 L.R.R.M. 2140, 2144 (1970); see also Grasko v Los Angeles, 107 Ca. Rptr. 334, 31 Cal. App. 3d 290 (Ct. App. 2d Dist. 1973).

ment collective bargaining takes place. California requires school boards to discuss at least the procedures relating to educational policy if the teachers so request even though a binding agreement cannot be made.[44]

In Arizona, a court upheld the "meet and confer" part of a contractual agreement but not that part of an "impasse procedure" requiring board compliance with an outside decision. The issue arose over the board's refusal to use a negotiated "impasse procedure" in regard to teachers' salaries. In a suit brought by the teacher association to enforce the procedure, the court held the agreement legal insofar as the "impasse procedure" required joint meetings of both parties, but illegal in that the "impasse procedure" required the board, against its better judgment, to bargain the issue. Enforcing the procedure, the court ruled, would be to vest in a union the exclusive power granted by the legislature to the board to determine employee-employer relationships.[45] According to this court, at least, compulsory mediation and arbitration, a common method of settling disputes in both public and private sectors, would seem to be ruled out in Arizona. If one assumes that once a school board negotiates a provision it generally will work to comply with it regardless of its legal enforceability, then the impact of these agreements on the use of innovative educational technology may well be substantial.

In a suit not decided as of this writing, the Philadelphia Parents' Union has charged the city with abdicating its policymaking duties by allowing the Philadelphia Federation of Teachers to share decision-making powers over extra-curricular activities, teacher transfers, working conditions, joint committees, and over the right to arbitration in the dismissal of a nontenured teacher.

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[44]Cal. Educ. Code §§13080-90 (West 1969), as amended (West Supp. 1974).

[45]Bd. of Ed. v Scottsdale Ed. Ass'n., 17 Ariz. App. 504, 498 P. 2d 578 (1972).

The suit seeks to have nullified pertinent sections of the contract between the union and the city on the basis of violation of the state school code and the Philadelphia city charter. The parent group regards those provisions of the contract as roadblocks to quality education. The union, of course, sees the action as "union busting." The suit raises the larger question of the extent to which a school district can contract away its responsibilities. This question will be discussed in the next section.

It is conceivable that other anti-technology provisions will be demanded by teachers who feel threatened by the use of educational technology. For example, teachers might well request that staffing requirements continue to be tied to certification to avoid the extensive use of teacher aides in conjunction with educational technology, particularly in combination with differentiated staffing; or teachers might seek to play a crucial role in the development and implementation of innovative educational programs. Neither of these demands have been reflected in the current agreements, but as one commentator suggests "almost anything is negotiable."[46] As the impact of technology on education is felt one can expect increasing awareness and opposition by teachers' associations to the extent that their members' interests are adversely affected.

As local teacher groups gain in experience in negotiating agreements, attention seems to shift from an emphasis on welfare issues to an emphasis on "conditions of work" (broadly defined) and policy questions.[47] For example, several local associations had negotiated the procedures involved in approving

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[46]John L. Metzler. "Scope of Negotiations in Public Education," 2 Journal of Law and Education, p. 145 (Jan. 1973).

[47]William J. Schaefer, Jr. "A Study of Negotiated Contracts and Their Actual and Perceived Effects on School District Media Programs." Unpublished Doctoral Dissertation, Indiana University, Bloomington, 1974.

the purchase of instructional materials and textbooks. "Instructional materials" could include instrumentation as well as materials, e.g. closed circuit television, audio-tutorial laboratories, and computer assisted instruction. Even if instrumentation is not included directly, programing would be. Teacher groups might not approve purchase of an entire course on video tape or film, or in a form useable in an audio-tutorial lab on the basis that the materials could be used to replace staff, or might be used to break a strike. Purchase of individual items may not be seen as a threat, but purchases of instructional systems could be. A recent study revealed that union negotiators in particular viewed educational media as potential rivals and as threats.[48]

The possibility of a Federal bargaining law has been raised recently in Congress. Predictably the American Association of School Administrators is opposed to a Federal law. One of the implications of such a law foresees state and local political officials becoming directly involved in negotiations. Also of concern to administrators is the possibility of the Federal law permitting bargaining over policy issues. However, a Federal Bargaining law that went much further than simply legalizing negotiations would probably be declared unconstitutional. An amendment to the Constitution would be required placing the responsibility for education under the Federal government. Such an amendment is highly unlikely.

Legal Status of the School Board's Authority to Contract

The extent to which boards of education and state departments of education can delegate educational responsibility is not clear. This question was raised in the last section in reference to professional negotiations. Court decisions favorable to school boards in negotiation issues may not be favorable when applied

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[48]Paul Dawson. "Teacher Militancy and Instructional Media." 19 AV Communication Review, pp. 184-197, Summer, 1971.

to areas in which the board chooses to delegate instructional authority. Performance contracting is one such area.

While performance contracting is not a current issue in education, it was in the immediate past and could become an issue once again. Certainly the basic legal question was left unanswered during the relatively brief period of time that performance contracts were in vogue.

The vast majority of performance contracts were negotiated between school boards and private agencies. The contracts ranged from improvement of specific skills of specified groups of children to assignment of an entire school (Gary, Indiana) to a private company. Considering the wide geographic distribution of performance contracts, it is strange that in no state was a case brought into court challenging the legal authority of a board of education to delegate instructional authority. While each state has its unique set of educational codes, all states have created networks of school districts for the purpose of carrying out the state's constitutional authority over education.

School districts may be generally defined as local administrative authorities with fixed territorial limits, created by the legislature, and subordinate to its will, as agents of the state for the sole purpose of administering public education.[49] As a legislatively created civil division of the state, a school district enjoys closer proximation to the state than to the community it serves.[50] One of the corollaries of this theorem that the school district is legally regarded as an instrumentality of the state, created by the state, for state purposes, is that the school district has no inherent power to contract.[51] It must look to the legislature for the extent of its contractual authority.

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[49] Kies v Lawry, 199 U.S. 233, 50L.Ed. 26, 26 S.Ct. 27.

[50] Monaghan v School District, 211 Or. 360, 315 P. 2d. 797 (1957).

[51] Wichita Public School Employees v Smith, 397 P. 2d. 357 (Ks. 1964); Barth v School District of Pennsylvania, 395 Pa. 557, 143 A2d. 909 (1958).

Often the language of the statutes and the cases interpreting the powers a board may exercise appear to give the school board almost unlimited control over education. For example, it is routinely said that the school board possesses the powers expressly granted by statute, "those necessarily or fairly implied" in the "powers expressly granted," and "those essential to the declared objects and purposes of the corporation."[52] The board is allowed wide discretion in determining policies and broad latitude in carrying out the "objective of providing the best possible system in the most efficient and economical way."[53] In spite of this first-glance "hands off" approach by the courts, however, there may be several legal obstacles to a performance contract. For example, a performance contract might be attacked as against public policy if the school board has contracted to employ private individuals when public employees have been employed to perform a comparable job.[54] To avoid this pitfall the school board might well limit the contract to those services which the school cannot provide (or perhaps cannot provide effectively).

A more general objection might be that the school is under a constitutional or statutory duty to perform a task which has been contracted to the outside party. For example, Article IX section 6 of the California Constitution provides in part that: "No school or college or any other part of the Public School System shall be directly or indirectly, transferred from the Public School System or placed under the jurisdiction of any authority other than one included within

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[52]McGilvra v Seattle School District, 113 Wash. 619, 624, 194 P. 817, 819 (1921).

[53]Utah Plumbing and Heating Contractors Ass'n. v Board of Education, 19 Utah 2d. 203, 206, 429 P. 2d. 49, 51 (1957).

[54]Reed Martin. "Performance Contracting: Making It Legal," 87 Nations Schools p. 62, January 1971.

the Public School System." In a recent case,[55] this language was limited to transfers of the responsibility for the actual teaching process but was held not to prohibit a contract for research and development with an outside party aimed at improving education. However, in another California case,[56] a school board was barred from contracting with an outside agency for ordinary janitorial services. The court stated that school districts have power to contract only as provided by statute, and in the absence of such provision, the board in question was required to employ classified personnel for that purpose. This is a narrow reading of the law and would seem to foreclose the possibility of performance contracting. A more general reading would be that while a performance contract involves teaching by outside parties, the whole transaction still remains within the jurisdiction of the public school system. To protect such a reading the school board would probably have to maintain close control over at least the basic policies and goals under which the performance contractor is working. The extent of the control necessary has yet to be defined. There is no case law in this area evidently because the course of American education has been one of consolidation and centralization of authority in order to gain the economic and other advantages of size and there are few instances of decentralization of substantial authority in the school systems.[57]

The question of control raises perhaps the biggest obstacle to performance contracting. There is a traditional rule that once the legislature has granted

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[55]California Sch. Emp. Ass'n. v Sunnyvale Elemen. Sch. District, 36 Cal. App. 3d. 46, 111 Cal. Rptr. 433 (1973).

[56]California School Employees Ass'n. v Willits Unified Sch. District, 243 Cal. App. 2d. 776, 52 Cal. Rptr. 765 (1966).

[57]"School Decentralization: Legal Paths to Local Control." 57 Georgetown Law Journal 992, 994 (1969).

power to an agency, that power cannot be transferred to either an outsider or a subordinate.[58] The rationale for the rule prohibiting subdelegation seems to be the fear of arbitrary action by an agent acting in its own interest and not in the public's interest. The general rule has been modified to the extent that subdelegation will be upheld if the delegated duties involve an acceptably small decision-making power.[59] Often a division is made between discretionary duties and ministerial duties with only the latter being transferable. Of course most duties involve the use of some discretion, so the problem is one of degree. In the context of school board actions, the ban on subdelegation has been strictly applied.[60] For example, the appointment by a superintendent of a teacher has been held an illegal usurpation of the statutory duties vested in the school board.[61] It is clear all education policy-making functions must be performed by the school board.[62] For this reason one commentator on the legality of performance contracting suggests three factors which will show a retention of control by the school board.[63] First, properly drafted program specifications which leave little to interpretation can indicate the board's intent to remain in charge. Second, the school must provide sufficient staff expertise

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[58]Aspice v American Woolen Co., 74 R.I. 425, 60 A. 2d. 865 (1948); Hillman v Northern Wasco County People's Util. Dist., 213 Ore. 264, 323 P. 2d. 664 (1958).

[59]E.g., Gamboni v Otoe County, 159 Neb. 417, 422, 67 N.W. 2d. 489, 495 (1954).

[60]Murry v Union Parrish School Board, 185 So. 305 (La. 1938); Smith v Board of Educ., 264 Ky. 150, 94 S.W. 2d. 321 (1936); Muehring v School Dist., 224 Minn. 432, 28 N.W. 2d. 655 (1947); Gavend v City of Thornton, 437 P. 2d. 778 (Colo. 1969).

[61]Coleman v District of Columbia, 51 App. D.C. 352, 279 F. 990 (1922); Big Sandy School Dist. v Carroll, 433 P. 2d. 325 (Colo. 1967).

[62]See Martin, supra, n 54.

[63]Id.

to monitor the program while in operation. Finally, the purpose of the contract must indicate the desire to retain control. An open-ended program with no evaluative standards or no procedure for absorption by the school system if the program proves successful may fail as contracting away too much discretion. The safest approach legally would be to have such "turnkey" procedures built into the original contract.

There are three other possible arguments for performance contracting which might avoid the ban on the delegation of discretion. First it might be argued that the school board has an implied power of experimentation. This has been recognized by at least one court.[64] In that case the Chicago School Board had permitted students voluntarily to split their school day between public and private schools. In essence the board was allowing an outside party to take over part of its educational function without adopting the board's own policies and standards. The issue of improper delegation of authority was not raised in the case but this clearly was involved. The court upheld the plan under the implied power to experiment. (It is interesting to note that no mention was made concerning the continuation of the program if proven successful.)

The second argument to be made is that the absoluteness of the rule that a board of education cannot contract away discretionary powers has been eroded somewhat by the developments in the area of collective bargaining with public employees. This aspect was discussed in an earlier section so suffice it to say here that the trend is in the direction of a highly permissive view of the scope of collective bargaining. Since board collective bargaining agreements clearly impair the board's discretion, this trend lends support to the proposition that a school board can redelegate some of its powers.

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[64] Morton v Bd. of Ed. of Chicago, 216 N.E. 2d. 305 (1966).

The final argument is that the performance contract is necessary for the effective operation of the school system. The necessity argument has been recognized by the courts in several contexts. In one case,[65] an assessor was given the implied power to employ experts to help him on a task which required more than one assessor. In another[66] the delegation of the power to determine entrance salaries in a state agency was upheld because efficient administration would otherwise be difficult if not impossible. Finally, one court faced with a delegation of discretionary powers focused not on the original administrative structure, but on the purposes for which the agency was formed, and found implied statutory authority for any subdelegation necessary for the realization of those purposes.[67] The reasons supporting the subdelegation rule were balanced against the demands of the situation and found "clearly outweighed by the need for responsive and responsible agency action."[68] Such analysis clearly would be supportive of a performance contract.

In the absence of on-point case literature, authorities understandably disagree on the legality of performance contracting. The counsel to the New York State Education Department does not believe that school boards in New York have the authority to contract with third parties to provide instructional services in public schools.[69] However, Martin and Blaschke, who have

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[65] Conroy v City of Battle Creek, 314 Mich. 210, 22 N.W. 2d. 275 (1946).

[66] McGovern v Patterson, 273 App. Div. 35, 75 N.Y.S. 2d. 492 (1947).

[67] State v Imperatore, 92 N.J. Super. 347, 233 A. 2d. 498 (App. Div. 1966), cert. denied, 48 N.J. 442, 226 A. 2d. 431 (1967).

[68] Id. at 354, 223 A. 2d. at 501.

[69] New York State Education Department. Performance Contracting in Elementary and Secondary Education. A Report Showing the Developments on a Nationwide Basis and the Implications for New York State. Albany: Division of Evaluation, New York State Education Department. 1970. ED 049 525.

been prominent in performance contracting as middlemen between school boards and contractors, claim that school boards have the authority to contract as long as they make no improper delegation of policy-making powers.[70] How this might be done was mentioned earlier in this section. It should be pointed out that Reed Martin, author of the conditions under which boards could contract, is an attorney for Education Turnkey Systems, an organization that provides management support to both boards and contractors.

Perhaps the best opportunity to try performance contracting in the courts occurred during the Gary, Indiana experience.[71] Gary had contracted the operation of an entire school to an outside agency, Behavioral Research Laboratories (BRL). Authority over sizeable portions of the curriculum, the materials of instruction, and staffing were delegated by the school district to BRL. While the nominal principal of Banneker School remained, BRL put one of its own employees in actual charge of the school. The delegation of authority was almost total and most certainly illegal. The reactions of the Indiana State Department of Public Instruction and the AFT local were quick to come and predictably negative.

Because staff changes made by BRL were probably in violation of the contract between the union and Gary, formal opposition and subsequent legal action by the union was anticipated. However, the union's opposition was muted by a recent history of friction between the teachers and the community. The almost entirely

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[70]Reed Martin and Charles Blaschke. "Contracting for Educational Reform," 52 Phi Delta Kappan 403-405, December 1970.

[71]The two best sources of information on the Gary performance contract are: John A. Wilson. Banneker: A Case Study of Educational Change. Homewood, IL: ETC Publications, 1973; and J. A. Macklenburger. Performance Contracting 1969-1971. Worthington, OH: Charles A. Jones Pub. Co., 1972.

black community served by Banneker was hostile to the predominantly white teachers' union, particularly because of a bitter strike the year before the performance contract started. And the Banneker community favored the BRL contract.

The state department declared the BRL contract illegal but, in typical education fashion, wanted to "settle out of court." The closest the state department came to statutory action was an unsuccessful vote to "decommission" the school, which, if successful, would have deprived Gary of state financial aid. The state department's own investigator reported a situation he considered to be clearly an illegal abdication of responsibility on the part of the school district. The staffing pattern of the school was altered drastically during the course of the contract. Pupil/certificated teacher ratios were in excess of state requirements. In fact the proportion of certificated teachers to para-professionals was reversed during the contract. In addition the school was being administered by a non-certificated employee of BRL. However, the State of Indiana never did bring legal action against Gary.

Thus the opportunity to get court decisions on several important questions was lost. From the point of view of this study the more important points to be tested were: certification requirements for staff in terms of pupil/teacher ratios; the extent to which a school district may contract for instructional services; and the use of state financial aid to pay a company for <u>performance</u> of instructional services. On the last point, the project in Gary was the first performance contract paid for by state monies rather than Federal.

Considering all of this, it is reasonable to expect in the near future a number of suits to be brought into court that will explore the parameters of a school district's authority to contract. States will vary, and do vary now, in

the degree to which contracting is permissible. Conspicuous by its absence in the literature on many of the areas of inquiry of this study is the Education Commission of the States. One would have expected more leadership and guidance from an organization composed of legislators, governors, state superintendents, and other key state decision makers.

The Courts and Units of Measure of Quality

As the courts began to enter into the areas of educational policy and governance, they had to seek yardsticks by which they could measure or gauge the relative merits of opposing arguments. If a parent group charges in a legal action that children attending school X are not receiving as "good" an "education" as students in school Y in the same district, the court needs some units of measure to judge the validity of the argument and the quality of the respective programs. Unfortunately, education has not developed, nor been interested in developing, reliable output measures by which to appraise effectiveness of school programs. As pointed out in the beginning of this report, emphasis over a long period of time has been placed on input measures as indicators of quality. For example, schools compensate teachers on the basis of training and experience, not on teaching effectiveness. It should not surprise us, then, that the courts have tended to turn to input measures for evidence in disputes over program.

In making the series of landmark decisions in the District of Columbia that resulted in court ordered redistribution of educational resources, the court gave validity to the use of a number of input measures as indicators of educational quality.[72] Per pupil expenditures, length of teacher experience,

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[72]D. L. Kirp and M. G. Yudof. Educational Policy and the Law. Berkeley, CA: McCutchan. 1974. pp. 567-577.

and pupil/teacher ratios figured prominently in the court's deliberations. While the evidence in the District of Columbia situation was, in several input measures, very persuasive and the disparities very glaring, ready acceptance of such measures has its hazards. Other courts in other cases have followed similar lines of reasoning. While understandable, the danger is that judicial precedent will be set with insufficient evidence of the relationship of such measures to output.

The effect of teacher training, teacher experience, per pupil expenditures, pupil/teacher ratios, etc. on the output of an educational institution is not well established. The well known "Coleman Report" identifies home, neighborhood, and peers as correlating more highly with school achievement than variables associated with instruction. Summaries of research on teaching have consistently concluded that little is known about the impact of the kinds of input measures mentioned above.

During the heyday of performance contracting, use of standardized tests (output measures) as yardsticks of contractor effectiveness was severely criticized.[73] Justifiable as the criticism was, and is, such tests are still more reliable as measures of effectiveness than the input measures previously cited. Criterion referenced tests would certainly be even more reliable. Despite the traditional posture of educators that educational effectiveness cannot be measured by specific outcomes, the courts should encourage the development of such output measures, and place less reliance on input measures. A good place to look for initial guidance is the latter part of a recent review of research on teacher competence by McNeil and Popham.[74] Instructional

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[73]Robert E. Stake. "Testing Hazards in Performance Contracting." 52 Phi Delta Kappan. June 1971.

[74]J.D. McNeil and W. J. Popham. "The Assessment of Teacher Competence" in R. M. W. Travers (ed.), Second Handbook of Research on Teaching. Chicago: Rand McNally and Co. 1973. pp. 233-241. See also the work of the Clearinghouse for Applied Performance Testing, Northwest Regional Educational Laboratory, Portland, Oregon.

productivity can only be measured by output. Inputs are variables to be manipulated to achieve desired outputs. Under the present educational structure, however, the inputs have become the ends.

Conclusion

The major thesis of the study was borne out. The legal impediments do exist. However, the situation is obviously in flux. Certainly more court cases on the extent to which boards of education can contract with other parties will be forthcoming. Parent and taxpayer groups have become interested parties and will no doubt continue to challenge negotiated contracts of any kind that they deem detrimental to education or cause tax increases. Teacher groups will continue to protect certification requirements in relation to pupil/certificated teacher ratios. The accrediting associations are also likely to feel the pressure of teacher groups to maintain favorable pupil/teacher ratios when setting school standards.

Certain legal barriers are coming down. State aid formulas are tending to eliminate instructional units as the basis for disbursing funds. This trend, coupled with growing awareness of school boards of the force of their legal responsibilities, may provide the leverage necessary for school districts to achieve a balance between legitimate teacher demands and cost/effective deployment of educational resources.

In October, 1975, the principal investigator interviewed Byron Hansford, Executive Secretary, Council of Chief State School Officers. Hansford was asked if he thought the real impediments to the introduction of instructional technology were legal or more in the area of interpretation and policy-making on the part of state departments of education. Unhesitatingly, he responded that the major deterrents were the interpretations of state departments of their authority and in the policies they adopted. This study bears out his opinion.

The Addison Trail High School case is an excellent example of the extent to which the state department can open or close the gate on instructional innovation involving technology. Anyone who has been in education and has had the opportunity to observe state departments in action could cite similar instances. A thorough study of the attitudes and policies of state departments of education in regard to instructional technology is a logical next step, especially in the face of evidence that state departments are becoming more receptive to innovations favorable to instructional technology.

One of the consequences of teacher militancy has been the creation of schisms between state teacher groups and state departments of education over certain issues. In Colorado, for example, the state department has endorsed the concept of accountability over the vigorous protests of the Colorado Education Association. In Michigan, the state department endorses and supports performance contracts in spite of opposition by state teacher groups. One state department official told the principal investigator that his office was conducting an experiment in redeployment of resources along the lines recommended by the Conant study cited earlier, but was keeping it quiet due to opposition of the state teacher group. Long regarded as ultra conservative gatekeepers, state departments are beginning to be advocates of change. How pervasive this has become and to what effect should be investigated and documented.